

# NEVADA DIVISION OF ENVIRONMENTAL PROTECTION FACT SHEET

(pursuant to NAC 445A.236)

**Permittee Name:** Givers Gain LLC  
2755 East Desert Inn Road  
Las Vegas, NV 89109

**Permit Number:** NEV97014

**Location:** JFDI Conference & Training Center  
1 JFDI Way, Alamo, Lincoln County, NV 89001  
Located 1.5 mi. NW of Alamo, NV  
Latitude: 37° 23' 15"N, Longitude: 115° 10' 30"W  
Township 6S, Range 61E, Sections 31-32

**General:** The Permittee operates an executive conference and training center on a 70-acre ranch, which is located approximately 1.5 miles northwest of Alamo, Lincoln County, NV. The main building complex includes facilities for conference meeting rooms, food preparation and 18 guest rooms (4 persons/room). Domestic (sanitary) wastewater from the facility is treated on-site in a 15,000-gpd capacity package treatment plant, manufactured by Santec Corp. The package plant's treatment capacity was sized to handle the sanitary wastewater needs of up to 160 guests and employees. The Santec package treatment plant is installed below-grade like a traditional septic tank. The following photo is not from the JFDI facility but does give the reader an illustration of an installed Santec package plant.



Photo #1: Santec Package Plant

The following photo shows aeration of the mixed liquor at the JFDI Center, Alamo, NV. The Division took this photo on March 3, 2003.



Photo #2: Aeration of Mixed Liquor at JFDI

Biological wastewater treatment occurs in four staged aeration reactors, i.e., extended aeration. The package plant was originally designed to denitrify using a methanol feed reactor. According to the facility's operator, SPB Utilities, Inc., operation of the methanol feed reactor was discontinued after two years of operation. The operator found that the methanol reactor was difficult to maintain because the facility's wastewater flows are highly variable. Between conference sessions, only a small amount of wastewater is generated at this facility. Presently, on/off aeration is used to achieve denitrification, in a treatment manner similar to a sequential batch reactor. Over the past two years, the effluent's nitrogen content has averaged 8.4 mg/L of total nitrogen as nitrogen using this approach.

Treated effluent from the package plant is dosed to an effluent reuse field, which has been planted with grass (lawn sod). The reuse field consists of six adjacent drainfields. Each drainfield measures 30 ft. (width) by 54 ft. (length). The drainfields are located immediately behind the main building complex and provide ornamental landscaping for the center. The total area of the reuse field is approximately  $\frac{1}{4}$  acre. The effluent is delivered to the sod's root zone via 1 in. diameter distribution lines, which have been buried 1 ft. deep. Excess effluent beyond the grass uptake requirements is percolated to the groundwater.

**Flow:** The package wastewater treatment plant is permitted for 0.015 MGD (15,000 gpd). Since this facility's startup in 1999, wastewater flows have usually averaged between 1,100-1,700 gpd. The package plant incorporates approximately  $1\frac{1}{2}$  days of wastewater storage in an equalization basin and an effluent dosing tank.

**Receiving Water Characteristics:** Treated effluent is disposed via effluent reuse and percolation to groundwater of the State. The facility has not yet installed its required monitoring well, and a written request for waiver of the monitoring well has not been submitted to the Division. Impacts to the groundwater from effluent reuse since 1999 are therefore unknown at this time.

According to the facility's preliminary design report, groundwater occurrence beneath the disposal field was not observed during pre-construction activities, but soil boring depths were limited to 10 ft. below ground surface (bgs). Shallow groundwater at the eastern edge of the building site was found

within 4 ft. bgs.

**Schedule of Compliance:** According to the Division's compliance tracking database, the following schedule of compliance requirements remain overdue: a.) Part I.A.16.b - combined Operations & Maintenance (O&M) Manual and Effluent Management Plan (EMP), due on June 30, 1998; b.) Part I.A.16.c - installation of a monitoring well, due on May 4, 1998; and c.) Part I.A.16.d - certification of construction, due within 30 days of the installation of the package (refer to permit #NEV97014 issued on 2/4/98). Since this facility has started operations in 1999, the Division still requires the Permittee to submit monitoring well installation plans and a combined O&M/EMP documentation within thirty (30) days of the permit's renewal (issuance) date.

**Proposed Effluent Limitations and Special Conditions:**

**Table 1: Plant Discharge Limitations**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD	0.015 (15,000 gpd)		Continuous	Flow Meter
BOD <sub>5</sub> , mg/L (Influent)	Monitor & Report		Monthly/Quarterly <sup>1</sup>	Composite
BOD <sub>5</sub> , mg/L (Effluent)	30	45	Monthly/Quarterly <sup>1</sup>	Composite
TSS, mg/L (Influent)	Monitor & Report		Monthly/Quarterly <sup>1</sup>	Composite
TSS, mg/L (Effluent)	30	45	Monthly/Quarterly <sup>1</sup>	Composite
Total Nitrogen as N, mg/L (Effluent)	10.0 mg/L		Monthly/Quarterly <sup>1</sup>	Composite
Fecal Coliform, cfu or mpn/100 ml (Effluent)	Monitor & Report		Monthly/Quarterly <sup>1</sup>	Discrete
pH, Std. Units (Effluent)	Between 6.0 & 9.0		Monthly/Quarterly <sup>1</sup>	Discrete

1. Sampling shall continue on a monthly basis until the Schedule of Compliance requirements from the 2/4/98 permit have been addressed. Upon completion of these requirements, sampling frequency shall be reduced to quarterly.

**Table 2: Groundwater Monitoring (MW-1)**

PARAMETER	GROUNDWATER LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	10.0	Quarterly	Discrete
Total Nitrogen as N, mg/L	Monitor & Report	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation, ft	Monitor & Report	Quarterly	Field Measurement

**Rationale for Permit Requirements:** The Division proposes that upon completion of the Schedule of Compliance requirements from the February 4, 1998 permit, the sampling frequency will be reduced from monthly to quarterly.

**Procedures for Public Comment:** The Notice of the Division's intent to issue a permit authorizing the operation of the treatment and reuse facility, subject to the conditions contained within the permit is being sent to the **Lincoln County Record** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **May 16, 2003 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental

Commission pursuant to NRS 445A.605.

**Proposed Determination:** The Division has made the tentative determination to issue (renew) the proposed groundwater discharge (effluent reuse) permit for a period of five (5) years.

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Bureau of Water Pollution Control

Date: April 10, 2003

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